Summary of Sowing the Seeds Through Science and Engineering Research Act (H.R. 4596)

H.R. 4596 implements recommendations related to strengthening long-term basic research contained in the National Academy of Sciences (NAS) report, *Rising Above the Gathering Storm: Energizing and Employing America for a Brighter Economic Future*. It authorizes 10% increases per year in funding for basic research in the physical sciences, mathematical sciences, and engineering at the principal Federal agencies supporting such research; provides for up to 200 new awards per year, of $100,000 per year for 5 years, to outstanding early-career researchers; creates a new, portable graduate fellowship program for individuals pursuing studies in areas of national need; establishes a presidential innovation award to stimulate scientific and engineering advances in the national interest; and establishes a national coordination office to identify and prioritize research infrastructure needs at universities and national laboratories and help guide the investments of new infrastructure funds authorized for the National Science Foundation and the Department of Energy.

Sectional Summary of H.R. 4596

Section 1 is the short title of the bill.

Section 2 authorizes appropriations for basic research activities in the physical sciences, mathematics and computer sciences, and engineering at four agencies and authorizes appropriations for all basic (6.1) research at the Department of Defense. The funding levels increase by 10% for each year, with FY 2006 as the base year:

$ millions

Agency	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
National Science Foundation	2114.1	2325.5	2558.1	2813.9	3095.3
Department of Energy	2205.4	2425.9	2668.5	2935.4	3228.9
NASA	1669.7	1836.7	2020.3	2222.4	2444.6
National Institute of Standards and Technology	86.2	94.9	104.4	114.8	126.3
Department of Defense	1784.8	1963.2	2159.5	2375.5	2613.0

Of the amounts authorized, 8% are designated for support of high-risk, high-payoff research to be selected by technical program manages at each agency.

Section 3 adds supplemental funding for up to 200 new awards under the Presidential Early Career Award for Scientists and Engineers programs currently administered by 5 agencies. The awards go to outstanding researchers at the beginning of their careers and provide 5 years of research funding support at $100,000 per year per award. The following amounts are authorized:

$ millions

Agency	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
National Science Foundation	8.2	16.4	24.6	32.8	41.0
National Institutes of Health	4.8	9.6	14.4	19.2	24.0
Department of Energy	3.6	7.2	10.8	14.4	18.0
Department of Defense	2.4	4.8	7.2	9.6	12.0
NASA	1.0	2.0	3.0	4.0	5.0

Section 4 establishes the Graduate Scholar Awards in Science, Technology, Engineering, or Mathematics (GSA-STEM) program at the National Science Foundation (NSF). GSA-STEM is a graduate fellowship program providing 5000 new fellowships per year and modeled on the NSF Graduate Research Fellowship program. Each three-year fellowship awarded follows the student to his/her institution of choice, provides an annual $30,000 stipend, and provides a $15,000 fee to the institution in lieu of tuition. Selection of fellowship recipients follows the guidelines of the existing NSF fellowship program, except that special consideration is given to students who pursue advanced degrees in fields of national need, as determined by an advisory board established for GSA-STEM. Authorizes $225 million for NSF for FY 2007, $450 million for FY 2008, and $675 million per year for FY 2009 through FY 2011.

Section 5 establishes the Presidential Innovation Award signified by a medal awarded periodically on the basis of recommendations from the Director of the Office of Science and Technology Policy. The award is to individuals who develop unique scientific or engineering ideas judged to stimulate scientific and engineering advances in the national interest, illustrate the linkage between science and engineering and national needs, and provide an example to excite the interest of students in science or engineering professions.

Section 6 establishes a National Coordination Office for Research Infrastructure under the Office of Science and Technology Policy to identify and prioritize deficiencies in research facilities and instrumentation in academic institutions and national laboratories and to make recommendations for use of funding authorized. The funds authorized are to be used for competitive, merit-reviewed projects for construction and maintenance of research facilities, including instrumentation, computing and networking equipment and other physical resources. Authorizes $333 million per year for NSF for FY 2007 through FY 2011, and $167 million per year for the Department of Energy for FY 2007 through FY 2011.